24" OCTAGONAL PILES

Low prestress level

- 13 strands - $f_{pc} = 744$
- $f_c = 6$ ksi - 424 ton axial load
- $f_c = 7$ ksi - 503 ton axial load
- $f_c = 8$ ksi - 582 ton axial load

High prestress level

- 22 strands - $f_{pc} = 1211$
- $f_c = 6$ ksi - 394 ton axial load
- $f_c = 7$ ksi - 473 ton axial load
- $f_c = 8$ ksi - 552 ton axial load
24" OCTAGONAL PILE
13 strands, $f'_c = 6$ ksi

SECTION PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$I$</td>
<td>$18,161$ in$^4$</td>
</tr>
<tr>
<td>$r$</td>
<td>$6.2$ in</td>
</tr>
<tr>
<td>$A$</td>
<td>$477$ in$^2$</td>
</tr>
<tr>
<td>$w$</td>
<td>$524$ plf</td>
</tr>
<tr>
<td>Perimeter</td>
<td>$79.5$ in</td>
</tr>
</tbody>
</table>

$1/r$ = effective unsupported length of the pile / radius of gyration

24" Oct Pile
13 strands
$fc = 6$ ksi

AXIAL LOAD $\phi P_n$ (kips)

BENDING MOMENT $\phi M_n$ (ft.k.)
24" OCTAGONAL PILE
13 strands, $f'_c = 7$ ksi

SECTION PROPERTIES
$I = 18161$ in$^4$
$r = 6.2$ in
$A = 477$ in$^2$
$w = 524$ plf
Perimeter = 79.5 in

$I/r$ = effective unsupported length of the pile / radius of gyration

![Graph of 24" Octagonal Pile](image-url)
24" OCTAGONAL PILE
13 strands, $f'_c = 8$ ksi

SECTION PROPERTIES

$I = 18161$ in$^4$
$r = 6.2$ in
$A = 477$ in$^2$
$w = 524$ plf
Perimeter = 79.5 in

$1/r =$ effective unsupported length of the pile / radius of gyration

24" Oct Pile
13 strands
$fc = 8$ ksi
24" OCTAGONAL PILE
22 strands, $f_c' = 6$ ksi

SECTION PROPERTIES
$I = 18161$ in$^4$
$r = 6.2$ in
$A = 477$ in$^2$
$w = 524$ plf
Perimeter = 79.5 in

$l/r = \text{effective unsupported length of the pile / radius of gyration}$

24" Oct Pile
22 strands
$fc = 6$ ksi
24" OCTAGONAL PILE
22 strands, \( f'_c = 7 \text{ ksi} \)

**SECTION PROPERTIES**
- \( I = 18161 \text{ in}^4 \)
- \( r = 6.2 \text{ in} \)
- \( A = 477 \text{ in}^2 \)
- \( w = 524 \text{ plf} \)
- Perimeter = 79.5 \text{ in} \)

\( I/r \) = effective unsupported length of the pile / radius of gyration

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**24" Oct Pile**
22 strands
\( f_c = 7 \text{ ksi} \)
24" OCTAGONAL PILE
22 strands, \( f_c = 8 \) ksi

SECTION PROPERTIES
- \( I = 18161 \text{ in}^4 \)
- \( r = 6.2 \text{ in} \)
- \( A = 477 \text{ in}^2 \)
- \( w = 524 \text{ plf} \)
- Perimeter = 79.5 \text{ in} \\

\( \frac{1}{r} \) = effective unsupported length of the pile / radius of gyration

![Graph](image-url)

24" Oct Pile
22 strands
\( f_c = 8 \) ksi